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# Walk-in centres in primary care: a review of the international literature

Chris Salisbury and James Munro

## SUMMARY

*Nurse-led walk-in centres were first announced in April 1999. They represent a new development in unscheduled care provision in the United Kingdom (UK) National Health Service (NHS). By the end of 2000, 40 NHS walk-in centres had been opened, with further centres recently announced. This paper aims to review international experience with walk-in centres in primary and emergency care and identify relevant lessons for the UK.*

*This study is a systematic review, with qualitative synthesis of relevant findings. Studies were identified from seven major bibliographic databases using a sensitive search strategy, and 244 relevant documents relating to walk-in or 'ambulatory care' centres were identified. Users of walk-in centres in other countries tend to be a relatively affluent population of working age, and a different population from those using conventional general practice services. Walk-in centres are used particularly when other health services are closed. The problems presented are mainly minor illnesses and minor injuries. People choose this form of care mainly for reasons of convenience, and satisfaction with the service is generally high. The very limited evidence available suggests that walk-in centres provide care of reasonable quality, but there is insufficient evidence to draw firm conclusions about the impact of walk-in centres on other healthcare services or the costs of such care.*

*Although a number of countries have had a long experience of walk-in centres, the lack of reliable evidence on many of the most important issues is notable. In the NHS, walk-in centres represent a radically innovative attempt to improve access to health care, but the limited research available does little to inform their development. Important questions that need to be addressed include whether walk-in centres do improve access to care, for whom, and at what overall cost.*

**Keywords:** walk-in centres; ambulatory care; systematic review.

## Introduction

IN April 1999 the United Kingdom (UK) prime minister announced that the National Health Service (NHS) would set up 20 pilot walk-in centres.<sup>1</sup> Following a bidding process, plans were eventually approved for 40 centres, to be opened by December 2000, representing an investment of approximately £31 million in the first year. The concept of the walk-in centre has been further described in an NHS circular,<sup>2</sup> a series of press releases,<sup>3-7</sup> and a resource pack for organisations preparing to establish a centre.<sup>8</sup> A second round of three further centres was announced in April 2001.<sup>9</sup>

An NHS walk-in centre characteristically has extensive opening hours and a convenient location, and it offers the opportunity to consult a health professional without the need for an appointment. In this way, walk-in centres are intended to improve the accessibility of primary health care, providing a service at a time and in a manner convenient to people who may have difficulty accessing other healthcare providers. An important aspect of NHS walk-in centres is that they are predominantly led by nurses, supported by clinical assessment software, with the aim of reducing the load on doctors in general practice and on accident and emergency (A&E) departments.

In the light of this development, this review of the international literature relating to the concept of walk-in centres for primary health care was conducted, with a particular emphasis on the relevance of this literature to the NHS in the UK.

## Method

Since walk-in centres in other countries may be described in various ways, and there are no directly applicable MeSH terms, the search strategy involved combinations of text words relating to types of centres, rapid access, nurse management, and minor illness (Box 1). Searches were carried out in MEDLINE, the Science and Social Science Citation indexes, the British Nursing Index, PsychLIT, CINAHL, the National Research register, and the Cochrane Library, and they were updated to May 2001. No language restrictions were applied. Articles were assessed for relevance from their titles and abstracts (where available). Those that appeared to be relevant were obtained and reviewed.

Articles from any country that related to walk-in centres or 'ambulatory care centres' were eligible for inclusion. Articles that described centres or clinics designed to offer primary care on a non-appointment walk-in basis were included. This included centres catering for minor injuries as well as minor illness, but excluded centres designed for medical emergencies and major trauma. 'Drop-in' clinics that catered only for one specific health need, such as contraception, were excluded.

Published articles of all types, including discussion

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1. \*Community health centers/
2. \*Ambulatory care facilities/
3. \*Health services accessibility/
4. 1 or 2 or 3
5. Primary health care/
6. Family practice/
7. 'GENERAL PRACTICE'.mp.
8. 'primary health care'.mp.
9. 5 or 6 or 7 or 8
10. 4 and 9
11. service\$.tw.
12. unit\$.tw.
13. clinic\$.tw.
14. centre\$.tw.
15. center\$.tw.
16. access\$.tw.
17. facilit\$.tw.
18. consult\$.tw.
19. walk\$.tw.
20. drop\$.tw.
21. mobile\$.tw.
22. unplanned.tw.
23. 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18
24. 19 or 20 or 21 or 22
25. ((service\$ or unit\$ or clinic\$ or centre\$ or center\$ or access\$ or facilit\$ or consult\$) adj2 (walk\$ or drop\$ or mobile\$ or unplanned)).tw.
26. intermediate tier.tw.
27. self referral.tw.
28. same day appointment\$.tw.
29. fast track.tw.
30. one stop.tw.
31. immediate access.tw.
32. appointment\$.tw.
33. (without or necessary or unnecessary).tw.
34. (appointment\$ adj2 (without or necessary or unnecessary)).tw.
35. (unscheduled access or unplanned access).tw.
36. 26 or 27 or 28 or 29 or 30 or 31 or 34 or 35
37. nurse led.tw.
38. minor injur\$.tw.
39. minor illness\$.tw.
40. minor trauma\$.tw.
41. minor treatment\$.tw.
42. 37 or 38 or 39 or 40 or 41
43. ((service\$ or unit\$ or clinic\$ or centre\$ or center\$ or access\$ or facilit\$ or consult\$) adj2 (nurse led or minor injur\$ or minor illness\$ or minor trauma\$ or minor treatment\$)).tw.
44. 38 or 39 or 40 or 41
45. (nurse led adj2 (minor injur\$ or minor illness\$ or minor trauma\$ or minor treatment\$)).tw.
46. (miu or mius).tw.
47. 'Wounds and injuries'/
48. 46 and 47
49. mtc\$.tw.
50. 47 and 49
51. maxi nurse\$.tw.
52. maxinurse\$.tw.
53. polyclinic\$.tw.
54. (hour\$ adj2 pharmac\$).tw.
55. 25 or 36 or 43 or 45 or 48 or 53 or 54
56. (walk\$ adj5 (clinic\$ or centre\$ or care)).mp.  
[mp=title, abstract, registry number word, mesh subject heading]
57. \*Ambulatory care/
58. (4 or 57) and 9
59. 56 and 58
60. 55 or 59

Box 1. Literature search strategy.

documents, review articles, and primary research, were included. In view of the different types of centres and settings described, and the different types of data available in different papers, a quantitative analysis was not appropriate. The analysis involved a qualitative synthesis of this material in terms of characteristics of people using centres and their problems, descriptions of the process and outcomes of care, the impact of centres on other agencies, and evidence about costs.

## Results

Two hundred and forty-four relevant articles were identified, and these form the basis for this review. Only those that are referred to directly are referenced in this paper — a full bibliography is available from the author.

Although walk-in centres are a new phenomenon within the NHS, the ideas behind them can be traced to other developments in the UK and overseas. Within the UK, minor injuries units have been established in many towns, often replacing small A & E departments as services are rationalised within larger centralised A & E departments. These units are normally staffed entirely by nurses, and experience has suggested that nurses working in this way are able to offer a safe, effective, and popular service.<sup>10-12</sup>

In addition, the NHS Direct telephone helpline has been implemented nationally. This is based on nurses providing advice to patients with a wide range of problems, using computerised decision support software. An evaluation of the acceptability and safety of this service,<sup>13-16</sup> supported by evidence about nurse-led telephone triage in out-of-hours care,<sup>17</sup> has led to the suggestion that nurses working with decision support may be able to provide similar assessments and advice on a face-to-face basis. Recent randomised controlled trials of nurse practitioners in primary care<sup>18,19</sup> have provided further evidence that nurses with extra training can manage most patients presenting with acute minor illness.

Alongside developments in the NHS, pressure for quick and convenient access to medical care has led to the establishment of a number of privately owned 'drop-in' medical centres. These centres are run by a number of commercial organisations, and are mainly situated in transport centres or business districts to cater for relatively affluent commuters.<sup>20,21</sup>

Walk-in centres have existed in other countries, notably the United States of America (USA), Canada, Australia, and South Africa, for many years. The first centres in North America opened in the USA in the early 1970s, and were variously termed as 'emergency centres', 'ambulatory care centres', or 'urgent care centres'. By 1986, some 3800 such centres were in operation, dealing with 53 million patient contacts per year.<sup>22</sup> During the 1980s, walk-in centres were also developed in Canada.<sup>23</sup> A report in 1993 suggested that about a third of Ontario residents visited a walk-in centre each year.<sup>24</sup> However, there are important distinctions between the concept of a walk-in centre in these countries compared with the new centres in England.

First, centres in other countries are led by doctors rather than by nurses. Second, they have developed in an entrepreneurial competitive healthcare economy, in direct

competition with family doctors. Since doctors in these countries are mainly paid on a fee-for-service basis, walk-in centres compete for business by offering quick and convenient access, especially when more traditional family practices are closed or are not able to offer a quick appointment.

Perhaps unsurprisingly, family physicians in these countries have been critical of walk-in centres, arguing that they offer low-quality, fast throughput care with no continuity, leaving other health providers to deal with demanding, complex, and ongoing problems.<sup>25-27</sup>

It is also important to note that in North America and Australia many walk-in centres developed, at least initially, primarily to provide care outside office hours. Unlike in the UK, where doctors are responsible for a defined list of patients 24 hours a day (even though they may provide this care through a co-operative or deputising service), doctors in other countries are generally less accessible outside office hours, and patients are free to choose the most convenient health provider.

No systematic programme of research, examining the impact of walk-in centres from different perspectives, has been published in any country, although a number of relevant studies are currently under way in Ontario.<sup>23</sup> Most published work is of small-scale descriptive studies of a single walk-in centre. Much of this research is out of date, and some is of poor quality. Almost all studies focus on a single issue (usually activity levels, the process of care, or patient satisfaction), with very few comparative studies. There is very little research evidence available about the impact of walk-in centres on health outcomes or other important issues, such as the costs of care, or the impact on other health services. Reviews of the literature are also few. A recent review by Jones was restricted to walk-in centres in Canada,<sup>27</sup> and earlier reviews by Miller<sup>28</sup> and Rylko-Bauer<sup>29</sup> are now over 10 years old.

### *Types of patients consulting in walk-in centres*

A number of observational studies have described the characteristics of patients consulting in walk-in centres.<sup>21,30-37</sup> As is the case in primary care generally, women consult in walk-in centres more often than men. A high proportion of consultations concerns young adults. Although consultations concerning children are common, they represent a smaller proportion of all consultations in walk-in centres than in general practice. The elderly also consult less often in walk-in centres than they do in other primary care settings.

Two studies have compared the age distribution of walk-in centre users with that of the local population, confirming that children and young adults are over-represented among walk-in service users, with the elderly being under-represented.<sup>31,38</sup>

There is some evidence that walk-in centres attract a disproportionately high number of people in employment. In a study of a paediatric walk-in centre in Ottawa, parents were more likely to be employed and of higher social status than the average local population, and in 54% of cases both parents were in paid employment. The main motivation for attending this walk-in centre was the convenience of the hours.<sup>37</sup> Rylko-Bauer concluded that walk-in centres in the USA tended to attract a young, white population of relative-

ly high socioeconomic status, with over 85% of patients being under 50 years of age. Only a minority of people using walk-in centres relied on Medicare or Medicaid.<sup>29</sup>

In Canadian studies of walk-in centres, and in British studies of minor injuries units, the majority of attenders were registered with a general practitioner (GP). One study of a clinic serving a deprived urban community suggested that many unregistered patients resisted attempts made by the walk-in centre to incorporate them into mainstream primary care systems.<sup>33</sup>

### *Type of problem presented*

In studies from North America, consultations mainly concerned minor illness.<sup>30,33,37,39-41</sup> The commonest conditions encountered were respiratory tract infections (representing about half of all consultations in several studies),<sup>30,31,40,42</sup> skin disorders, and musculoskeletal problems.<sup>34,41,43</sup> In contrast (and not surprisingly), studies of minor injuries units in the UK suggest that they see mainly minor injuries and accidents, with relatively few people consulting about minor illness.<sup>11,12</sup>

### *Times that patients consult*

A number of studies of UK minor injuries units<sup>11,12,44-50</sup> and studies from North America of walk-in centres<sup>30-32,32-37,41,43,51,52</sup> have described the volume and pattern of activity. Most studies suggest that centres deal with 20 to 50 patients per day, although two inner-city hospital-based centres report over 100 consultations per day.<sup>33,35</sup> The majority of calls to walk-in centres in North America are made outside office hours.<sup>30,31,53</sup> In this respect, they appear to fulfil a similar function to primary care centres operated by GP co-operatives and deputising services in the UK. Therefore, the temporal pattern of use of walk-in centres elsewhere may be misleading in the context of the UK.

### *Reasons why patients consult*

A number of studies have addressed the issue of why people choose to consult in a walk-in centre rather than contact an alternative provider, and the findings are consistent. The main factors appear to be convenience of location, extended opening hours, the non-appointment service, and the minor nature of the problem.<sup>10,12,26,30,31,37,39,53</sup> Several UK studies of minor injuries units suggest that people attend there because of difficulties in gaining access to general practice,<sup>10,12,38,45</sup> and in a Canadian study it appeared that most people attended a walk-in centre because of this increased accessibility, rather than dissatisfaction with the care provided by their family physician or the local emergency department.<sup>30</sup>

There is a suggestion that many users of walk-in centres may have a strong sense that their problems are particularly urgent. Rizos noted that 63% of patients at the walk-in centre studied thought that an acceptable wait to see a doctor with their problem was less than 12 hours, although most patients in this study had respiratory tract infections or other non-urgent (from a clinically determined perspective) minor illness.<sup>30</sup> In another North American study, 34% of those attending with a respiratory tract infection felt they needed to

be seen within two hours.<sup>54</sup>

Several North American studies have found that only a minority of patients had attempted to contact their usual doctor before attending the walk-in centre, suggesting that patients regarded the walk-in service as either more appropriate or more convenient for their health needs.<sup>30,37,45</sup>

### *Patient satisfaction*

Studies from both the USA<sup>31,55</sup> and Canada<sup>30,37</sup> have demonstrated high levels of satisfaction among patients attending walk-in centres. Similar findings apply to studies of patients attending minor injuries units in the UK.<sup>10,12,48</sup> Patient satisfaction appears to be most strongly related to interpersonal aspects of care, such as the doctors' or nurses' behaviour<sup>56,57</sup> and their perceived concern.<sup>55</sup>

The findings about high levels of satisfaction, and the importance of interpersonal factors, are common to studies of patient satisfaction with health care and should be interpreted cautiously.<sup>58</sup> It is well recognised that patients may express general satisfaction with health care but still voice many detailed criticisms if questioned specifically. In particular, those patients who have chosen to attend a walk-in centre are a self-selected group, who are more likely to prefer this service than those who have chosen to attend elsewhere. For example, a study of patients attending a Canadian emergency department showed that many people had a low opinion of walk-in centres.<sup>59</sup>

### *Continuity of care*

Walk-in centres in North America appear to place relatively little emphasis on supporting continuity of care with family physicians, which may not be surprising in view of the competitive relationship that often exists. Only 47% of walk-in centres in Toronto routinely informed GPs of patients attending the clinic.<sup>60</sup> Similarly, most patients appear unconcerned about the lack of continuity, with only 20% of patients at one clinic saying it mattered whether they saw a different GP at each consultation, and 20% being concerned about the absence of their medical records at the walk-in centre.<sup>30</sup> This supports the findings of a study from Wakefield, in England, which found that potential users of the walk-in centre did not appear to be concerned about the lack of continuity of care, with some people positively preferring the anonymity offered by a walk-in centre.<sup>61</sup> In contrast, several studies from UK general practice have shown that continuity of care from a doctor who knows them is an important concern for many people.<sup>62-64</sup> This may suggest that people have different expectations of a walk-in centre compared with general practice. It is also consistent with the findings of another recent study, which showed that patients consulting in general practice value personal continuity of care for serious health problems more than for less serious ones.<sup>65</sup>

### *Quality of care*

Very little information is available from the research literature about the quality of care provided by walk-in centres. Studies of minor injuries units in the UK have suggested that care by nurses is safe.<sup>11,49,50,66</sup> However, assessment of quality of care is difficult, and this work has a number of limita-

tions. It is mainly based on audit of requests for investigations or X-rays, or adequacy of case records. Assessments have been subjective and relatively unsophisticated. Research from minor injuries units may, in any case, have limited relevance to walk-in centres, as nurses in the latter are likely to encounter a much wider range of undifferentiated problems.

### *The impact on other agencies*

The potential for walk-in centres to reduce healthcare costs by diverting people from other agencies is an important consideration. This potential is likely to be realised only if centres divert patients rather than duplicate care, if the cost of the walk-in centre is less than the alternative, and if a high proportion of those people consulting a walk-in centre would otherwise have gone elsewhere rather than managed the problem themselves. This is particularly important given that the vast majority of problems experienced by individuals are managed within a lay referral network, without involving any health professionals, and any system that alters this balance could have profound effects on the total demand for health care.<sup>67,68</sup>

There is some limited evidence about these issues, much of it conflicting. In terms of duplication, Bell found that 67% of patients attending walk-in centres in Canada attended a GP within the following seven days.<sup>53</sup> It is unclear whether these re-attendances were owing to referral from the walk-in centre, patients seeking a 'second opinion', or attendance about a different problem. In the UK, Paxton and Heaney found that only 21% of patients attending a minor injuries unit consulted a GP within 14 days.<sup>10</sup> The same authors found that, in the three months following the opening of the unit, there was a 24% drop in the number of patients attending the local A & E department.<sup>11</sup> In contrast, a large US study found no impact of walk-in centres on nearby A & E departments.<sup>69</sup>

There is also potential for duplication if a high proportion of people consulting in a walk-in centre have to be referred for further advice to another health provider, such as a GP or an A & E department. Evidence from studies of nurse-led minor injuries units in the UK suggests that between 2% and 10% of cases have to be referred to a doctor.<sup>11,38,44,46,48-50</sup> The case mix at walk-in centres is likely to include a higher proportion of patients with minor illness. Studies of management by nurses in general practice suggest that between 10% and 20% of these patients may need to be referred.<sup>19,70-72</sup>

In terms of alternatives to attending a walk-in centre, Rizo found that 24% of patients would otherwise have attended an emergency department, 28% would have contacted their regular physician, 28% would have attended another walk-in centre, and 16% would not have used any other health facility.<sup>30</sup> There is some suggestion in the literature that patients with minor injury would choose an A & E department if the walk-in service were unavailable, and patients with minor illness would choose to see their usual doctor.<sup>51</sup> Studies of minor injuries units in the UK suggest that patients mainly use them as an alternative to A & E departments rather than as an alternative to general practice.<sup>12,10,48</sup> The relevance of these findings from minor injuries units to walk-in centres within the NHS is uncertain. These studies are also of limit-

ed value because they are based on the stated intentions of people visiting walk-in centres and minor injuries units, rather than on actual consulting patterns, and are likely to underestimate the proportion of people who would have managed the problem without involving any health professional.

### Costs

There is a marked lack of available information about the costs of walk-in centres. Only one study was identified, which suggested that the cost of care in walk-in centres in Canada was similar to costs in general practice and lower than the costs of hospital emergency departments.<sup>73</sup> This study was recognised by its author to have a number of methodological weaknesses, including potential misclassification of walk-in centres, after-hours clinics, and emergency departments.<sup>23</sup>

### Conclusion

To summarise the evidence from the international literature, it appears that users of walk-in centres in other countries are predominantly a relatively affluent population of working age and a different population from those using conventional general practice services. The majority of calls to walk-in centres are made when other health services are closed. The problems presented are mainly minor illnesses and minor injuries. People choose this form of care mainly for reasons of convenience, and they are generally very satisfied with the service they receive. The very limited evidence available suggests that walk-in centres provide care of reasonable quality. There is insufficient evidence to draw any confident conclusions about the issues of the impact of walk-in centres on other health care services or on the costs of care.

Although walk-in centres have been established in several countries for more than a decade, the paucity of research evidence about many of the most important issues is notable. Much of the available research comes from the USA and Canada, but this may be of limited relevance to the UK because of the very different healthcare systems in these different countries. The most relevant research from the UK relates to studies of minor injuries units, because of the similarities between these units and walk-in centres. However, there are also important differences between minor injuries units and walk-in centres in terms of their objectives, their location, and the range of problems likely to be presented by patients. It cannot be assumed that the experience of minor injuries units is directly comparable to walk-in centres.

There is increasingly strong research evidence that nurses working in a general practice setting can safely and effectively manage minor illness.<sup>18,19,72</sup> It is important to note that this evidence relates mainly to nurse practitioners who have received extended training in the assessment and management of minor illnesses, and who are working in an environment where they are closely supported by medical colleagues. It does not necessarily follow that nurses without nurse practitioner training and who work independently of doctors can provide a similar standard of care in a different environment. Similarly, there is evidence that nurses are able to satisfactorily provide telephone triage of minor illness

using computerised decision support software.<sup>13,14,17</sup> However, it cannot be assumed that this applies to nurses working in the very different situation of face-to-face consultations that may include the need for clinical examination.

NHS walk-in centres represent a radically innovative attempt to improve access to health care. It is clear that the limited relevance and scope of the available research provides little useful evidence to inform the development of these centres. In a recent editorial, Hutchison argued the need for pre-planned rigorous evaluation of walk-in centres against clearly specified objectives, consideration of the effects that might occur elsewhere in the health care system and beyond, and anticipation of the potential responses of stakeholders, especially patients and GPs.<sup>23</sup> Important questions that need to be addressed include whether walk-in centres improve access for care, and for whom, and whether improved access relates to health needs. It is necessary to establish whether NHS walk-in centres provide safe care of high quality, and whether they are an efficient use of resources. This includes whether they are used appropriately to add value to patient care rather than to duplicate existing services, the impact of walk-in centres on the work of other health care providers, and the costs of providing care in centres.

The introduction of a new species into the complex ecology of health care is sure to have effects, whether obvious or subtle, on other health services. There may be effects on the volume of new patient demand, the need for follow-up care, the case mix, or the time distribution of demand, etc. Such effects may have implications for the staffing, resourcing, or indeed viability, of other services, and research will be needed to identify these effects.

In addition, there is the broader question of whether walk-in centres will change the total population demand for health care. By providing a new service, with low access barriers and extended hours, and which is specifically targeted towards minor conditions (which might previously have been ignored or managed at home) the potential is created for previously unexpressed demand now to become apparent. This will also be an important issue for future research.

From the outset, the UK government has emphasised its commitment to a full independent evaluation of the impact of walk-in centres in the NHS. This forms part of a programme of work that also includes local evaluation conducted by each centre, routine monitoring of activity and costs, and support for development. This should provide the first comprehensive evidence about the effectiveness, efficiency, and impact of walk-in centres within a healthcare system.

Since this review was accepted for publication, a number of papers have been published resulting from the programmes of research on walk-in centres in the UK and in Canada. Papers from the UK have described the activities of NHS walk-in centres and the characteristics of patients consulting in them,<sup>74</sup> the quality of care provided compared with general practice and NHS Direct,<sup>75</sup> and the level of patient satisfaction.<sup>76</sup> A paper describing the impact of walk-in centres on the workload of neighbouring NHS services is in press.<sup>77</sup> The full report of the National Evaluation of NHS walk-in centres is available to be downloaded electronically.<sup>78</sup>

The Canadian research has described the organisational characteristics of walk-in centres and other primary care settings,<sup>79</sup> the characteristics and attitudes of physicians working in them,<sup>80</sup> and the perceptions of doctors working in different settings about the impact of walk-in centres on the Ontario health care system.<sup>81,82</sup>

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